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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,365	07/10/2001	Fritz Gfeller	954-010306-US(PAR)	8852

7590 02/11/2003
Louis J. Percello
IBM Corporation
PO Box 218
Yorktown Height, NY 10598

EXAMINER

LAU, TUNG S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

NP

Office Action Summary	Application No.		Applicant(s)	
	09/902,365		GFELLER ET AL.	
	Examiner		Art Unit	
	Tung S Lau		2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 14, 16, 17 and 20-23 is/are rejected.
- 7) ☒ Claim(s) 4, 12, 13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- a. Claims 1-3, 5-11, 16-17 and 20, 21, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford et al. (U.S. Patent 4,384,354) in view of Scholz et al. (U.S. Patent 5,325,397).

Crawford discloses an apparatus, method, computer program run on a computer and readable medium for determining a pulse position encoded by pulse modulation having first and second components, a determination unit comprising a probability prediction of the pulse position of the first and second components (fig. 1-10F, col. 2-5, lines 55-18), symbol of the first and second components, signal is pulse position (fig. 1), asymmetric forms probability (fig. 3-5), second component has no influence on the value, better quality than the second components, more than 2 dimensions storage is of ROM, RAM in a computer system (fig. 6), probability formula (col. 8-11).

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Crawford does not disclose a probability lookup table format, Scholz disclose such application for more than one class of link probability distribution and have a high speed measuring system to obtain result quickly (col. 4, lines 3-8, fig. 4, 10c, col. 18, lines 46-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Crawford to have the probability lookup table format taught by Scholz in order to have a high speed measuring system to obtain result quickly by using more than one class of link probability distribution.

b. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Crawford as applied to claims above, and further in view of Rautiola et al. (U.S. Patent 5,949,775).

The Crawford combination disclose a method including the subject matter discussed above except the use of communication in the infrared region, Rautiola disclose such application and to direct visibility range the infrared link does not interfere with other similar connections and that IR does not reserve any radio frequencies in order not to cause interference on other radio frequency communication system (col. 7, lines 9-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Crawford to have the use of communication in the

infrared region taught by Rautiola in order not to cause interference on other radio frequency communication system.

Claim Objections

2. Claims 4, 12, 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach the use of Bayes' probability approach, detect of an illegal symbol and is a logic circuit, the pulse modulation is a 4- pulse position modulation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

3. Applicant's arguments filed 12/2/2002 have been fully considered but they are not persuasive.

A. Applicant argue that prior art fail to teach the 'determination unit'.

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However, Crawford discloses a determination unit comprising a probability prediction of the pulse position of the first and second components (fig. 1-10F, col. 2-5, lines 55-18), symbol of the first and second components, signal is pulse position (fig. 1), asymmetric forms probability (fig. 3-5), second component has no influence on the value, better quality than the second components, more than 2 dimensions storage is of ROM, RAM in a computer system (fig. 6), probability formula (col. 8-11).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309.

The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

TC2800 Customer Service RightFAX - (703) 872-9317

TL

January 29, 2003


MICHAEL NGHIEM
PRIMARY EXAMINER